

**BULLETIN**  
of the  
**ENTOMOLOGICAL SOCIETY OF AMERICA**

W. P. MURDOCH, *Editor*  
4603 Calvert Road  
College Park, Maryland 20740

**TABLE OF CONTENTS**  
**VOLUME 23**

**Number 1**

Where to Find It .....	Front Cover
Future National Meetings .....	Front Cover
Future Branch Meetings .....	Front Cover
Deceased Members .....	Front Cover
The Right to Publish—A Message from the President, R. F. Smith .....	1
Entomological Potpourri, K. L. Knight .....	3
Common Names of Insects .....	5
Evaluation of ARS Program on Alternative Methods of Insect Control: Host Plant Resistance to Insects, J. M. Schalk and R. H. Ratcliffe .....	7
Book Review—Urban Entomology .....	10
Insect Population Control Using Genetic Engineering, M. Fitz-Barle .....	11
Announcements .....	14
Space Studies with Insects, W. N. Sullivan, D. K. Hayes, M. S. Schechter, T. McIntyre, D. R. Morrison, and M. Fisher .....	15
Corrigendum .....	16
Announcement .....	16
A History of the Waco, Texas Cotton Insects Research Laboratory, 1939-1973, C. R. Parencia .....	17
Correction .....	19
International Commission on Zoological Nomenclature .....	19
Members in the News .....	19
World Food Crisis, D. Pimentel .....	20
Book Review—Genus <i>Schistocerca</i> (Acridomorpha, Insecta) .....	26
How Certain Insects Take the Bitter with the Sweet, D. M. Norris .....	27
Book Reviews .....	
Bees and Beekeeping .....	30
Classification of the Acridomorphoid Insects .....	30
CAST (Council for Agricultural Science and Technology) .....	31
Book Review—Mites of Moths and Butterflies .....	36
Proposed Intersociety Consortium for Plant Protection .....	37
Articles of Confederation of the ICPP .....	37
XV International Congress of Entomology Report .....	38
A.R.P.E. News .....	39
Editor's Comments .....	40
Minutes—1975 Meeting, Entomological Society of America .....	41

**Number 2**

Where to Find It .....	Front Cover
Future National Meetings .....	Front Cover
Future Branch Meetings .....	Front Cover
Deceased Members .....	Front Cover
Guidelines for Evaluating the Efficacy of Chemical Insecticides as Protectants of Stored Grain Against Insect Pests, D. W. LaHue and Lee Bulla .....	117
A Simple and Inexpensive Method for Preparing Slides Using Diazo Film, H. W. Elder and H. R. Agee .....	119
Scientists and Engineers in Economic Development .....	119
Entomology—Engineering Cooperation—Where Do We Go from Here?, D. B. Smith .....	120
Members in the News .....	123
1977 Meeting of ESA .....	124
Program Highlights .....	125
The Silver Anniversary of the Entomological Society of America, Arnold Mallis and R. H. Nelson .....	127
Minutes of the 53rd Annual Meeting Central States (Kansas) Entomological Society .....	129
Fourth International Congress of Pesticide Chemistry (IUPAC) .....	129
Notice to ESA Members—Special Program Feature .....	130
Common Names of Insects and Related Organisms: Additions and Changes .....	131
Editor's Comments, W. P. Murdoch .....	135
Pacific Science Association: Third Inter-Congress .....	135
ARPE News .....	136
V International Congress of Acarology .....	137
Butterfly Commemorative Stamps .....	138
Publications Received .....	139

**Issued March 15, 1977**

Opening Session .....	41
Preliminary Business Meeting .....	41
Final Business Meeting .....	43
Announcements .....	50
Governing Board 1976 .....	52
Report of the Auditors for 1975 .....	53
Officers, Entomological Society of America .....	56
Branch Officers .....	56
Editorial Boards .....	56
Section Officers .....	56
Sub-section Officers .....	57
Standing Committees .....	57
Book Review—Ecological Studies 13—Epidemics of Plant Diseases—Mathematical Analysis and Modeling .....	58
Reports of Representatives to Scientific Bodies for 1975 .....	59
Book Review—Factors Affecting Dispersal Distances of Small Organisms .....	61
Reports of Special Committees for 1975 .....	62
Members in the News .....	81
Book Review—Entomogenous Nematodes .....	81
Reports of Standing Committees for 1975 .....	82
Book Review—Arthropod Vectors of Disease .....	85
Reports of Editorial and Editorial Board Matters for 1975 .....	86
Book Reviews .....	
Catalogue of the Imperial College of Agriculture, University of the West Indies .....	90
Insects, Science and Society .....	90
Positions Wanted .....	91
Positions Available .....	91
Book Review—Key for the Identification of Apteroous and Alate Cereal Aphids with Photographic Illustrations .....	94
Publications Received .....	95
Book Reviews .....	
Sozialpolymorphismus bei Insekten (Probleme der Kastenbildung in Tierreich) .....	96
Coevolution of Animals and Plants .....	97
Description of Paper Categories for Honolulu Meeting .....	98
Paper for Presentation, Tear Sheet, Due July 1 .....	99
19th National Insect Photographic Salon, Tear Sheet .....	101
ESA Service Volunteers, Tear Sheets .....	103
A.R.P.E. Announcement of Vacancy .....	Back Cover

**Issued June 15, 1977**

Proceedings of the Fifty-first Annual Meeting Southeastern Branch—ESA .....	140
Proceedings of the Thirty-second Annual Meeting North Central Branch—ESA .....	141
VIIIth International Congress of the International Union for the Study of Social Insects (I.U.S.S.I.) .....	142
Positions Wanted .....	143
Positions Available .....	143
Nominations for Newcomb Cleveland Prize .....	145
Second Entomology Workshop on Education .....	145
4-H Entomology Film Available .....	145
Employment Information Exchange—Eastern Branch .....	145
Misc. Publ. Editorship Available .....	145
Seventh Annual Insect Photo Salon—Entomological Society of Canada .....	147
Book Reviews .....	
The Insects and Arachnids of Canada Part 2, The Bark Beetles of Canada and Alaska, Coleoptera: Scolytidae .....	148
Baculoviruses for Insect Pest Control: Safety Considerations .....	148
Entomogenous Nematodes, A Manual and Host List of Insect-Nematode Associations .....	149
Legion of Night: The Underwing Moths .....	149
Perspectives in Forest Entomology .....	150
Moths of Southern Africa .....	150
Annual Review of Entomology .....	151
Studies in Biological Control .....	151
Marine Insects .....	152
22nd Annual Southern Forest Insect Work Conference .....	153
Intersociety Consortium for Plant Protection .....	153
20th National Insect (Entomologic) Photographic Salon .....	155
Sustaining Associates—ESA .....	Back Cover

**BULLETIN**  
of the  
**ENTOMOLOGICAL SOCIETY OF AMERICA**

W. P. MURDOCH, *Editor*  
4603 Calvert Road  
College Park, Maryland 20740

**TABLE OF CONTENTS**  
**VOLUME 23**

**Number 1**

Where to Find It .....	Front Cover
Future National Meetings .....	Front Cover
Future Branch Meetings .....	Front Cover
Deceased Members .....	Front Cover
The Right to Publish—A Message from the President, R. F. Smith .....	1
Entomological Potpourri, K. L. Knight .....	3
Common Names of Insects .....	5
Evaluation of ARS Program on Alternative Methods of Insect Control: Host Plant Resistance to Insects, J. M. Schalk and R. H. Ratcliffe .....	7
Book Review—Urban Entomology .....	10
Insect Population Control Using Genetic Engineering, M. Fitz-Barle .....	11
Announcements .....	14
Space Studies with Insects, W. N. Sullivan, D. K. Hayes, M. S. Schechter, T. McIntyre, D. R. Morrison, and M. Fisher .....	15
Corrigendum .....	16
Announcement .....	16
A History of the Waco, Texas Cotton Insects Research Laboratory, 1939-1973, C. R. Parencia .....	17
Correction .....	19
International Commission on Zoological Nomenclature .....	19
Members in the News .....	19
World Food Crisis, D. Pimentel .....	20
Book Review—Genus <i>Schistocerca</i> (Acridomorpha, Insecta) .....	26
How Certain Insects Take the Bitter with the Sweet, D. M. Norris .....	27
Book Reviews .....	
Bees and Beekeeping .....	30
Classification of the Acridomorphoid Insects .....	30
CAST (Council for Agricultural Science and Technology) .....	31
Book Review—Mites of Moths and Butterflies .....	36
Proposed Intersociety Consortium for Plant Protection .....	37
Articles of Confederation of the ICPP .....	37
XV International Congress of Entomology Report .....	38
A.R.P.E. News .....	39
Editor's Comments .....	40
Minutes—1975 Meeting, Entomological Society of America .....	41

**Number 2**

Where to Find It .....	Front Cover
Future National Meetings .....	Front Cover
Future Branch Meetings .....	Front Cover
Deceased Members .....	Front Cover
Guidelines for Evaluating the Efficacy of Chemical Insecticides as Protectants of Stored Grain Against Insect Pests, D. W. LaHue and Lee Bulla .....	117
A Simple and Inexpensive Method for Preparing Slides Using Diazo Film, H. W. Elder and H. R. Agee .....	119
Scientists and Engineers in Economic Development .....	119
Entomology—Engineering Cooperation—Where Do We Go from Here?, D. B. Smith .....	120
Members in the News .....	123
1977 Meeting of ESA .....	124
Program Highlights .....	125
The Silver Anniversary of the Entomological Society of America, Arnold Mallis and R. H. Nelson .....	127
Minutes of the 53rd Annual Meeting Central States (Kansas) Entomological Society .....	129
Fourth International Congress of Pesticide Chemistry (IUPAC) .....	129
Notice to ESA Members—Special Program Feature .....	130
Common Names of Insects and Related Organisms: Additions and Changes .....	131
Editor's Comments, W. P. Murdoch .....	135
Pacific Science Association: Third Inter-Congress .....	135
ARPE News .....	136
V International Congress of Acarology .....	137
Butterfly Commemorative Stamps .....	138
Publications Received .....	139

**Issued March 15, 1977**

Opening Session .....	41
Preliminary Business Meeting .....	41
Final Business Meeting .....	43
Announcements .....	50
Governing Board 1976 .....	52
Report of the Auditors for 1975 .....	53
Officers, Entomological Society of America .....	56
Branch Officers .....	56
Editorial Boards .....	56
Section Officers .....	56
Sub-section Officers .....	57
Standing Committees .....	57
Book Review—Ecological Studies 13—Epidemics of Plant Diseases—Mathematical Analysis and Modeling .....	58
Reports of Representatives to Scientific Bodies for 1975 .....	59
Book Review—Factors Affecting Dispersal Distances of Small Organisms .....	61
Reports of Special Committees for 1975 .....	62
Members in the News .....	81
Book Review—Entomogenous Nematodes .....	81
Reports of Standing Committees for 1975 .....	82
Book Review—Arthropod Vectors of Disease .....	85
Reports of Editorial and Editorial Board Matters for 1975 .....	86
Book Reviews .....	
Catalogue of the Imperial College of Agriculture, University of the West Indies .....	90
Insects, Science and Society .....	90
Positions Wanted .....	91
Positions Available .....	91
Book Review—Key for the Identification of Apteros and Alate Cereal Aphids with Photographic Illustrations .....	94
Publications Received .....	95
Book Reviews .....	
Sozialpolymorphismus bei Insekten (Probleme der Kastenbildung in Tierreich) .....	96
Coevolution of Animals and Plants .....	97
Description of Paper Categories for Honolulu Meeting .....	98
Paper for Presentation, Tear Sheet, Due July 1 .....	99
19th National Insect Photographic Salon, Tear Sheet .....	101
ESA Service Volunteers, Tear Sheets .....	103
A.R.P.E. Announcement of Vacancy .....	Back Cover

**Issued June 15, 1977**

Proceedings of the Fifty-first Annual Meeting Southeastern Branch—ESA .....	140
Proceedings of the Thirty-second Annual Meeting North Central Branch—ESA .....	141
VIIIth International Congress of the International Union for the Study of Social Insects (I.U.S.S.I.) .....	142
Positions Wanted .....	143
Positions Available .....	143
Nominations for Newcomb Cleveland Prize .....	145
Second Entomology Workshop on Education .....	145
4-H Entomology Film Available .....	145
Employment Information Exchange—Eastern Branch .....	145
Misc. Publ. Editorship Available .....	145
Seventh Annual Insect Photo Salon—Entomological Society of Canada .....	147
Book Reviews .....	
The Insects and Arachnids of Canada Part 2, The Bark Beetles of Canada and Alaska, Coleoptera: Scolytidae .....	148
Baculoviruses for Insect Pest Control: Safety Considerations .....	148
Entomogenous Nematodes, A Manual and Host List of Insect-Nematode Associations .....	149
Legion of Night: The Underwing Moths .....	149
Perspectives in Forest Entomology .....	150
Moths of Southern Africa .....	150
Annual Review of Entomology .....	151
Studies in Biological Control .....	151
Marine Insects .....	152
22nd Annual Southern Forest Insect Work Conference .....	153
Intersociety Consortium for Plant Protection .....	153
20th National Insect (Entomologic) Photographic Salon .....	155
Sustaining Associates—ESA .....	Back Cover

## Number 3

Where to Find It	Front Cover
Future National Meetings	Front Cover
Future Branch Meetings	Front Cover
Deceased Members	Front Cover
Program Highlights, Washington, DC Meeting	157
Common Names of Insects and Related Organisms: Additions and Changes	165
Alexander von Humboldt Foundation Award	166
ESA Symposium: The Douglas-fir Tussock Moth Research and Development Program, K. H. Wright, Moderator	167
Advances in Understanding Population Dynamics of the Douglas-fir Tussock Moth, R. R. Mason	168
Factors Influencing Tree and Stand Susceptibility to Douglas-fir Tussock Moth Attack, K. J. Stoszek	171
Surveying for Douglas-fir Tussock Moth with Pheromone, R. L. Livingston and G. Daterman	172
Douglas-fir Tussock Moth: Direct Control with Chemical and Microbial Insecticides, W. W. Ciesla	174
Testing of Chemical and Microbial Insecticides for Safety . . . Some Techniques, P. J. Shea	176
An Approach to Evaluating Effects of Alternative Controls for Douglas-fir Tussock Moth, G. F. Schreuder	178
Integration of Program Outputs: Development of a Pest Management System, R. W. Campbell	179
First Announcement of Symposium on Prevention and Control of Stored-Food Products Insects	180
Insect Insurance: Potential Management Tool for Corn Insects, F. T. Turpin	181
Special Film Offer	184
A Bibliography of the Southwestern Corn Borer, <i>Diatraea grandiosella</i> Dyar (Lepidoptera: Pyralidae), W. P. Morrison et al.	185
Pilot Study for Insect Survey in Canada	190
Insects as Biological Indicators of Environmental Change, S. C. Lenhard and J. A. Witter	191
Editor's Comments, W. P. Murdoch	194
A Bibliography of the Cotton Leafperforator, <i>Bucculatrix thurberiella</i> , and a Related Species, <i>Bucculatrix gossypiella</i> , That Also Feeds on Cotton (Lepidoptera: Lyonetiidae), R. L. Smith and H. M. Flint	195
Proceedings of the Sixty-first Annual Meeting Pacific Branch—ESA	198
Plant Resistance to Cotton Insects, F. G. Maxwell	199
Maryland Center for Study of Systematic Entomology	203

## Number 4

Where to Find It	Front Cover
Future National Meetings	Front Cover
Future Branch Meetings	Front Cover
Deceased Members	Front Cover
Formation of the Aquatic Insects Subsection, ESA, K. W. Stewart	245
Department of Entomology Administration at the University of California, Davis, D. L. McLean and J. K. Clark	247
Erratum	250
Letters to the Editor	250
Georgia Entomological Society	250
Lost Members	250
Sex-Ratio Estimation, Sequential Sampling, and the Programmable Pocket Calculator, P. C. Johnson	251
Plant Protection Conference	254
AAAS Project on the Handicapped in Science	254
International Commission of Zoological Nomenclature	254
Guidelines for Preparing Slides for Use in Oral Presentations, E. P. Pieters	255
Preparation of Blue Background Slides, Abraham Hefetz	256
A Critical Evaluation of Bioassay in Insecticide Research: Likelihood Ratio Tests of Dose-Mortality Regression, N. E. Savin et al.	257
The Profitability of Integrated Pest Management: Case Studies for Cotton and Citrus in the San Joaquin Valley, D. C. Hall	267
New Approved Common Names for Insecticides	274

## Issued September 15, 1977

ESA Election Results	203
Second Coccidology Training Session	204
Auto-tutorial Instruction in Entomology: Insect Identification, D. R. Minnick and J. Webb	205
Smithsonian Opportunities in Biological Sciences	207
POLO: A New Computer Program for Probit Analysis, R. M. Russell et al.	209
Proceedings of the Twenty-fifth Annual Meeting Southwestern Branch—ESA	213
Design of a Pest Management Research and Development Program, R. W. Campbell and M. W. McFadden	216
Lost Members	220
First Announcement of International Symposium on Pollination	220
Publication Policies and Instructions for Contributors	221
Letter to the Editor	224
Special Committees—ESA	225
ARPE News	226
Joint Meeting in Mexico	227
Deadline for I and A Test Reports	229
Aerobiology: A New ALS Program	229
Affiliates of ESA	230
International Commission on Zoological Nomenclature	231
Positions Available	232
Positions Wanted	233
Members in the News	234
Publications Received	236
AAAS Evaluates Regulatory Activity of EPA	237
International Commission on Zoological Nomenclature Announcement	237
Fulbright-Hays Awards	237
Book Reviews	
The World of Spiders	238
Insect Development	238
Survey of the World's Aphids	238
Analytical Biochemistry of Insects	239
The Juvenile Hormones	239
Aerial Control of Forest Insects in Canada	240
Practical Insect Pest Management—A Self-Instruction Manual	240
Adaptation and Speciation in the Fall Webworm	241
Die Orthopteren Europas/The Orthoptera of Europe	241
Theory and Practice of Biological Control	242
Austrian Entomological Society	242
18th North Central Insect Photographic Salon	243

## Issued December 15, 1977

Washington State Entomological Society 1954-1976, D. Mayer et al.	275
Book Reviews	
The Life That Lives on Man	276
Insects and the Life of Man	295
The Scientific Journal: Editorial Policies and Practices	297
Adaptation and Speciation in the Fall Webworm	298
The Biology of Tribolium with Special Emphasis on Genetic Aspects	298
Advances in Insect Physiology	299
Atlas of Insects Harmful to Forest Trees	300
Insect Biochemistry: Outline Studies in Biology	301
The Beetles of America	301
Lygus Bugs: Crop Resistance and Physiological Nature of Feeding Injury, W. M. Tingey and E. A. Pillemer	277
A. C. Hodson Lectures	287
Editor's Comments, W. P. Murdoch	289
Members in the News	290
ARPE News	291
Special Announcements	292, 293
Election Results	293
Positions Wanted	294
Positions Available	294
Publications Received	296
Table of Contents for Volume 23	302
Statement of Ownership, Management, and Circulation	304